

REMARKS

Claims 1-2 and 4-7 are presently pending in this application.

Claim 1 has been amended to include the feature recited in now canceled claim 3, namely that the casting compound comprises a material containing a surfactant. Also, new claim 7 has been added to recite that the shape corresponding to the moldings is spherical. Support for new claim 7 may be found in the Specification at, for example, paragraph [0026] and in the drawings.

The Specification has also been amended to describe in the Title of the Invention and Abstract of the Disclosure sections that the invention is directed to a method for producing moldings and to correct typographical errors. Support for these amendments to the Specification may be found in claim 1, for example.

No new matter has been added by these amendments. Accordingly, Applicants respectfully request entry of the amendments.

Claim Rejections -- 35 U.S.C. §103(a)

The Examiner has rejected claims 1-2 and 4-6 under 35 U.S.C. §103(a) as being unpatentable (obvious) over U.S. Patent No. 4,946,633 of Saeki, et al. ("Saeki"). With regard to claims 1 and 2, the Examiner contends that Saeki discloses the invention substantially as claimed. The Examiner acknowledges that Saeki does not disclose the physical properties of materials applicable to the process or method of producing a plurality of moldings as claimed. However, the Examiner argues that Applicants' Specification (which Applicants understand to mean the Background of the Invention section of Applicants' Specification) shows that it is known to mold materials such as polystyrenes, polyamides, polyurethanes, cellulose ether or ester, polyethylene, polymethacrylic acid esters and other materials identified in Applicant's Specification.

The Examiner also acknowledges that Applicants' Specification does not disclose the hardness of these materials, as claimed, but contends that it is inherent that the materials possess a degree of hardness. The Examiner also notes that the hardness was determined by the Erichsen 486 method, and states that she has not found any hardness testing in prior art by this method, nor has she found any correlation between values of the Erichsen 486 method and other hardness standards. The Examiner concludes that it is Applicants' burden to prove that the prior

art products do not necessarily or inherently possess the hardness of the claimed resin.

Additionally, the Examiner argues that Applicants' Specification and Saeki are combinable because they are concerned with a similar technical field, namely, that of molding plural articles. The Examiner further concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the resin in Applicants' Specification in Saeki's molding process in order to obtain a product having characteristics of the resin.

With regard to claims 4, 5 and 6, the Examiner asserts that Saeki and Applicants' Specification disclose the claimed process as discussed above, including Saeki's molding process wherein: each of the cavities, except for cavities in a peripheral position of the mold, is arranged closely adjacent to four to six other of the cavities; the casting compound is introduced at a single point, which is located centrally in the mold; and the molding process is an injection molding method.

The Examiner rejects claim 3 under §103(a) as being obvious over Saeki, in view of Applicants' Specification, and in further view of U.S. Patent No. 5,009,425 of Okumoto, et al ("Okumoto"). The Examiner contends that Okumoto shows that it is known to add a surfactant to a material that is being injection molded. The Examiner also argues that Okumoto and Saeki are combinable because they are concerned with a similar technical field, namely, that of injection molding a resin to form a desired article. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a surfactant, as in Okumoto, during Saeki's molding process in order to produce an article having characteristics of a resin containing a surfactant.

Since the subject matter of claim 3 has been incorporated in claim 1, the rejection on the combination of Saeki, Applicants' Specification and Okumoto is the only one at issue. Applicants respectfully, but strenuously, traverse the Examiner's §103(a) rejection and the arguments in support thereof, for the reasons that follow.

At the outset, Applicants respond to the Examiner's comments that she has not found in the prior art any indication of hardness testing by the Erichsen 486 method, nor has she found any correlation between values of the Erichsen 486 method and other hardness standards. An Erichsen 486 is a force-measuring device or instrument (see ¶ [0029]). As such, unlike some

other hardness testers, when an Erichsen 486 device is used in accordance with the manufacturer's instructions or method, a hardness result is obtained based on the force (N) it takes to break an object such as the spheres described in the present application (see, e.g., ¶¶ [0028]-[0029]). More specifically, Applicants have defined hardness as the force at which an 11 mm sphere of material containing a surfactant will shatter (see, e.g., claim 1). Thus, a correlation does not and need not exist between the results obtained from an Erichsen 486 device and, for example, a Rockwell hardness tester which provides a numerical hardness value or result (e.g., R_C) particular to that type of instrument.

Applicant claims a method of producing a plurality of moldings in one mold which includes providing a fluid casting compound which, once it has solidified in the mold, has a hardness of at most about 200 N. The fluid casting compound is a material containing a surface-active agent (see amended claim 1 and ¶ [0012]). Importantly, the method of the present invention saves time by producing a large number of moldings without the need for finishing and/or without generating a significant amount of waste material (see ¶ [0007]).

In contrast, Saeki is directed to an improved method of producing semiconductor devices comprising the step of supplying pots 2 with a molding resin 20. As acknowledged by the Examiner, Saeki does not teach or suggest using a surfactant in the molding material and does not show or describe the physical properties of the materials used to make the semiconductor devices. Saeki does, however, state that the resin hardens over time such that resin encapsulated products and, ultimately, resin encapsulated semiconductor device components, are obtained (col. 4, lines 52-56). Thus, it is understood that the semiconductor devices of Saeki have a solidified hardness greater than that of the claimed fluid casting compound of the present invention.

Similarly, Okumoto also teaches using a molding resin. More specifically, a core 4 is formed in Okumoto by subjecting a molten mixture of a thermoplastic resin and a powder of a metal to injection molding using a metal mold (col. 4, lines 9-12). The thermoplastic resin can be a polyamide, polybutylene, terephthalate, polypropylene, ABS and hard vinyl chloride (see claim 1). The powder of the metal is described as a lead, zinc or tungsten powder having a high specific gravity and surface hardness (see claim 1, col. 4, lines 12-13 and Examples 1-5 at col. 4, line 44 to col. 6, line 25). A plurality of cores 4 are used to make golf club heads such that the

cores 4 have a specific gravity which range from 2.2 to 3.4 and a surface hardness which range from 115-120 in terms of Rockwell hardness (see col. 4, lines 12-13 and Examples 1-5 at col. 4, line 44 to col. 6, line 25). Thus, the cores 4 of Okumoto also have a hardness which is greater than that of the claimed fluid casting compound. As a result, neither Saeki nor Okumoto teaches or suggests providing a fluid casting compound of a material containing a surfactant wherein the material has a solidified hardness of at most about 200 N as presently claimed.

Additionally, while the Background of the Invention section of Applicants' Specification identifies several materials which may be used as casting compounds (see ¶ [0005]), this section of the Specification does not teach a fluid casting compound comprising a material containing a surfactant which has a solidified hardness of at most about 200 N, as presently claimed (see amended claim 1). Therefore, combining the Background of the Invention section of Applicants' Specification and Saeki's molding process does not teach or suggest the present invention. Moreover, it is improper to combine the claimed features of the casting compound with Saeki's molding process in order to obtain a process which results in a product having characteristics of the claimed casting compound as doing so is "the essence of hindsight." For these reasons, the Examiner cannot maintain a *prima facie* obviousness rejection based on the combination of the Background of the Invention section of Applicants' Specification and Saeki.

Also, there is no motivation to modify and combine Saeki, Applicants' Specification and Okumoto as suggested by the Examiner as Saeki and Okumoto are concerned with significantly different technical fields. As mentioned, Saeki teaches a method of producing semiconductor devices (see, Saeki, claim 1) and, in stark contrast, Okumoto teaches a method of making a golf club head (see, Okumoto, Abstract). Clearly, the manufacture of semiconductors is a different field from the manufacture of golf clubs. Besides, there is no suggestion, teaching or motivation to combine Saeki and Okumoto in the manner suggested by the Examiner. Thus, a person of ordinary skill in the art at the time of the invention would have no reason to modify the method of Saeki to add a surfactant as taught by Okumoto. To do so, as the Examiner has done here, is an improper hindsight reconstruction since the Examiner has chosen isolated, unrelated disclosures in the prior art to deprecate the claimed invention. In other words, the Examiner has improperly taken the Applicants' disclosure as a blueprint for piecing together the prior art to

defeat patentability which is the essence of hindsight. Accordingly, the Examiner's rejection of now canceled claim 3 was improper and should not be applied to the presently pending claims.

In any event, in order to establish *prima facie* obviousness, the Examiner must show that: (1) the references teach or suggest all elements of the claims; (2) that the cited references provide motivation to modify and combine the references as suggested by the Examiner; and (3) that the references provide a basis for a reasonable expectation of success from such motivation and/or combination. "Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). It is improper to use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988). Therefore, the suggestion to modify and/or combine and the reasonable expectation of success must come from the references without reference to Applicants' specification. *See, e.g., In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1998).

Notwithstanding, even if *prima facie* obviousness could be shown based on any of the above-noted references or combinations of references, such *prima facie* obviousness is sufficiently overcome by Applicants' improved and unexpected results (see ¶¶ [0026]-[0030]). More specifically, the claimed molding process includes providing a fluid casting compound of a material containing a surfactant, wherein the material has a solidified hardness of at most about 200 N, in order to save time by producing a larger number of moldings compared to other methods without the need for any finishing and/or without generating any significant amount of waste material (see ¶¶ [0007] and [0030]).

In view of the foregoing amendments and remarks, Applicants submit that the pending claims are patentably distinct from the prior art. Accordingly, reconsideration and withdrawal of the Examiner's rejections and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

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